

REMARKS/ARGUMENTS

The Office Action mailed December 2, 2003 has been carefully reviewed. Reconsideration of this application, as amended and in view of the following remarks, is respectfully requested. The claims presented for examination are: claims 10-28.

35 USC 112 Rejection

In numbered paragraph 3 of the Office Action mailed December 2, 2003, claims 15, 22, and 25 were rejected under 35 USC 112. Claims 15, 22, and 25 have been amended in response to the 35 USC 112 rejection.

With regard to claim 15, the amendment further defines the means as "said means for producing an electric field across said spaced electrodes comprises an AC power supply." It is now clear which means Applicants are referring.

With regard to claim 22, the amendment now specifies that it depends from claim 16 rather than claim 1.

With regard to claim 25, the amendment further defines the surface as "a surface along a length of said microchannel." It is now clear which surface Applicants are referring.

Applicants believe the amended claims 15, 22, and 25 comply with the requirements of 35 USC 112.

35 USC 103 Rejection - Van Gerwen et al. Reference

In numbered paragraph 10 of the Office Action mailed December 2, 2003, claims 10, 12-18, and 21-28 were rejected under 35 U.S.C. 103(a) as allegedly unpatentable over the Van Gerwen et al. (WO 97/21094) Reference.

Applicants have amended all of the independent claims in the application, claims 10, 16, and 24. The claim element "beads coated with antibodies that stick

to the pathogens" has been added to the independent claims in the application, claims 10, 16, and 24. Support for the addition of this element is found in the original specification. For example, the following portion of the specification shows support for the element:

"To amplify the impedance change signal, one or more beads 25 coated with antibodies can be introduced to the signal area (electrodes 20-18) as shown in Figure 5. The coated bead or beads 25 stick to the pathogen 24 and further add to the change in impedance between the electrodes 20 and 18."

(Page 8, lines 10-13)

Applicants respectfully submit that the amended independent claims 10, 16, and 24 are patentable over the Van Gerwen et al. Reference. For example, the Van Gerwen et al. Reference does not show or suggests the element of the amended claims, "beads coated with antibodies that stick to the pathogens."

Since all of the independent claims are patentable over the Van Gerwen et al. Reference, and the other claims depend from the independent claims, Applicants submit that all of the claims present for examination are patentable over the Van Gerwen et al. Reference.

35 USC 103 Rejection - Clark et al. in View of Kipling et al.

In numbered paragraph 11 of the Office Action mailed December 2, 2003, claims 10, 12-13, 16, and 20-26 were rejected under 35 U.S.C. 103(a) as allegedly unpatentable over the Clark et al. (U.S. Pat. 5,194,133) Reference in view of the Kipling et al. (U.S. Pat. 5,374,521) Reference.

Applicants have amended all of the independent claims in the application, claims 10, 16, and 24, and respectfully submit that the amended independent claims 10, 16, and 24 are patentable over the Clark et al. and Kipling et al. References. For example, the Clark et al. and Kipling et al. References do not show or suggests the element of the amended claims, "beads coated with

antibodies that stick to the pathogens.” Since all of the independent claims are patentable over the Clark et al. and Kipling et al. References and the other claims depend from the independent claims, Applicants submit that all of the claims present for examination are patentable over the Clark et al. and Kipling et al. References.

35 USC 103 Rejection - Clark et al. in View of Kipling et al. and Taylor et al.

In numbered paragraph 12 of the Office Action mailed December 2, 2003, claims 11, 14, 17-19, and 27-28 were rejected under 35 U.S.C. 103(a) as allegedly unpatentable over the Clark et al. (U.S. Pat. 5,194,133) reference in view of the Kipling et al. (U.S. Pat. 5,374,521) Reference, and further in view of the Taylor et al. (U.S. Pat. 5,001,048) Reference.

Applicants have amended independent claims 10, 16, and 24 and therefore have amended claims 11, 14, 17-19, and 27-28. Applicants respectfully submit that claims 11, 14, 17-19, and 27-28 are patentable over the Clark et al. Reference, the Kipling et al. Reference, and the Taylor et al. Reference and any legitimate combination of the references.

For example, the Clark et al. Reference, the Kipling et al. Reference, and the Taylor et al. Reference do not show or suggest the element of the amended claims, “beads coated with antibodies that stick to the pathogens.” Since all of the independent claims are patentable over the Clark et al. Reference, the Kipling et al. Reference, and the Taylor et al. Reference and all of the other claims depend from the independent claims, Applicants submit that all of the claims present for examination are patentable over the Clark et al. Reference, the Kipling et al. Reference, and the Taylor et al. Reference and any legitimate combination of the references.

35 USC 103 Rejection - Clark et al. in View of Kipling et al. and Stetter et al.

In numbered paragraph 13 of the Office Action mailed December 2, 2003, claim 15 was rejected under 35 U.S.C. 103(a) as allegedly unpatentable over the Clark et al. (U.S. Pat. 5,194,133) Reference in view of the Kipling et al. (U.S. Pat. 5,374,521) Reference, and further in view of the Stetter et al. (U.S. Pat. 5,567,301) Reference.

Applicants have amended claim 15 by amending its parent claim 10 and respectfully submit that claim 15 is patentable over the Clark et al. Reference, the Kipling et al. Reference, and the Stetter et al. Reference and any legitimate combination of the references.

The Clark et al. Reference fails to disclose the following elements of amended claim 10 and therefore claim 15: "beads coated with antibodies that stick to the pathogens."

The Kipling et al. reference also fails to show the elements of amended claim 10 and therefore claim 15 identified above.

The cited Clark et al., Kipling et al., and Stetter et al. references do not show the elements of the claimed invention and do not show the claimed combination of elements. There is no suggestion in the references to form a proper combination, nor do the cited references provide a teaching of the claimed combination.

35 USC 103 Rejection – Van Gerwen et al. in View of Taylor et al.

In numbered paragraph 14 of the Office Action mailed December 2, 2003, claims 11 and 19 were rejected under 35 U.S.C. 103(a) as allegedly unpatentable over the Van Gerwen et al. (WO 97/21094) Reference in view of the Taylor et al. (U.S. Pat. 5,374,521) Reference.

Applicants have amended claim 10 and therefore dependent claims 11 and 19. Applicants respectfully submit that amended claim 10 and dependent claims 11 and 19 are patentable over the Van Gerwen et al. Reference and the Taylor et al. Reference and any legitimate combination of the references.

The Van Gerwen et al. Reference fails to disclose the following elements of claims 11 and 19: "beads coated with antibodies that stick to the pathogens."

The Taylor et al. Reference also fails to show the elements of claims 11 and 19 identified above.

The cited Van Gerwen et al. and Taylor et al. references do not show the elements of the claimed invention and do not show the claimed combination of elements. There is no suggestion in the references to form a proper combination, nor do the cited references provide a teaching of the claimed combination.

35 USC 103 Rejection – Miles et al. in View of Kipling et al.

In numbered paragraph 15 of the Office Action mailed December 2, 2003, claims 10-28 were rejected under 35 U.S.C. 103(a) as allegedly unpatentable over the Miles et al. (U.S. 2002/0070114) Reference in view of the Kipling et al. (U.S. Pat. 5,374,521) Reference.

The Miles et al. (U.S. 2002/0070114) Reference and the subject patent application are both owned by the Regents of the University of California as evidenced by assignments recorded in the United States Patent and Trademark Office. The Miles et al. (U.S. 2002/0070114) Reference on its face shows that it is assigned to and owned by the Regents of the University of California. The subject application is also owned by the Regents of the University of California. On December 14, 2000 an assignment was filed in the subject application showing that the subject application is owned by the Regents of the University of California.

A terminal disclaimer in compliance with 37 CFR §321(c) in the form of a "DECLARATION UNDER 37 CFR §1.130(b), disclaiming the terminal portion of any patent granted on the subject application beyond the expiration date of any patent issued upon et al. (U.S. 2002/0070114)" is enclosed.

Applicants believe this overcomes the rejection of claims 10-28 under 35 U.S.C. 103(a) as allegedly unpatentable over the Miles et al. (U.S. 2002/0070114) Reference in view of the Kipling et al. (U.S. Pat. 5,374,521) Reference.

Response to Double Patenting Rejection - Copending Application

In numbered paragraph 18 of the Office Action mailed December 2, 2003 claims 10-28 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being allegedly unpatentable over claims 10-21 of copending U.S. Patent Application No. 09/737,927 filed on December 14, 2000 and published as U.S. Patent Application No. 2002/0070114 on June 20, 2002.

A terminal disclaimer in compliance with 37 CFR §321(c) in the form of a "DECLARATION UNDER 37 CFR §1.130(b), disclaiming the terminal portion of any patent granted on the subject application beyond the expiration date of any patent issued upon et al. (U.S. 2002/0070114)" is enclosed.

Obviousness-Type Double Patenting Rejection - Kipling et al.

In numbered paragraph 19 of the Office Action mailed December 2, 2003 claims 10-28 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being allegedly unpatentable over claims 10-21 of copending Application No. 09/737,927 (U.S. 2002/0070114) in view of Kipling et al. (U.S. Pat. 5,374,521).

A terminal disclaimer in compliance with 37 CFR §321(c) in the form of a "DECLARATION UNDER 37 CFR §1.130(b), disclaiming the terminal portion of any patent granted on the subject application beyond the expiration date of any patent issued upon et al. (U.S. 2002/0070114)" is enclosed.

Obviousness-Type Double Patenting Rejection - U.S. Patent No. 6,437,551

In numbered paragraph 20 of the Office Action mailed December 2, 2003 claims 10-28 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being allegedly unpatentable over claims 1-22 of U.S. Patent No. 6,437,551 in view of Kipling et al. (U.S. Pat. 5,374,521).

Applicants have amended all of the independent claims in the application, claims 10, 16, and 24. The claim element "beads coated with antibodies that stick to the pathogens" has been added to the independent claims in the application, claims 10, 16, and 24. U.S. Patent No. 6,437,551 and Kipling et al. do not show or suggest the element of the amended claims, "beads coated with antibodies that stick to the pathogens." Since all of the independent claims are patentable over U.S. Patent No. 6,437,551 and Kipling et al. and the other claims depend from the independent claims, Applicants submit that all of the claims present for examination are patentable over U.S. Patent No. 6,437,551 and Kipling et al.

SUMMARY

The undersigned respectfully submits that, in view of the foregoing amendments and the foregoing remarks, the rejections of the claims raised in the Office Action dated December 2, 2003 have been fully addressed and overcome, and the present application is believed to be in condition for allowance. It is respectfully requested that this application be reconsidered, that the claims be allowed, and that this case be passed to issue. If it is believed that a telephone conversation would expedite the prosecution of the present application, or clarify matters with regard to its allowance, the Examiner is invited to call the undersigned attorney at (925) 424-6897.

Respectfully submitted,



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